

EnviroServe Chemicals, Inc.



***Industrial Chemicals Manufactured
for the
Paint Pretreatment Industry***



We know what it takes:

Products, Service, Support, and Equipment

CLEANERS

Our **EnviroClean** and **EnviroWash** product lines were developed to clean the most tenacious soils. We have a wide variety of alkaline and neutral pH cleaners for practically any application.

EnviroServe Chemicals has a cleaning product that can meet your toughest cleaning requirements - such as stubborn oils, grease, carbon-based soils, fatty acid soils, waxy corrosion inhibitors, and light corrosion.

We have a full line of multi-metal safe cleaners as well as products developed exclusively for ferrous alloys. Our products are designed for use in multi-stage spray systems, agitated immersions, soak tanks, and belt washers. The industry has proven our products to be highly effective in all of these types of operations.

Alkaline cleaners have long been the prevailing choice in the pretreatment industry. These cleaners are designed to remove the toughest, most tenacious soils with a lower concentration of product. Alkaline cleaners are the best type of cleaners in operations where soil loads fluctuate from day to day. These cleaners remove a variety of soils in a very cost effective manner. Conventional alkaline cleaners in the market today operate at temperatures of between 140 and 160 °F.

New technology low temperature cleaners have been developed that can be used in most applications to reduce energy costs without sacrificing cleaning results. These cleaners are very effective in multi-stage spray washers at significantly lower temperatures than those typically found in most paint pretreatment washers. They are an excellent choice when two rinse stages are available prior to applying our inorganic conversion coating products. This line of cleaners operates efficiently at temperatures of between 90 and 120°F, depending on soil levels and type.

Neutral pH cleaners are an ideal choice when cleaning light soils. These cleaners are based on surfactants that are designed to “lift” the soils off the parts without using aggressive caustic cleaners. That makes them more environmentally friendly, while at the same time making them safer for the operators than conventional cleaners.

Innovations such as low conductivity cleaners, neutral pH cleaners and rust removers will increase your plant safety without adversely effecting productivity.

We have both powder and liquid products for your convenience.



AUXILIARY / COMPLEMENTARY PRODUCTS

pH adjuster down	EnviroAdjust 3243
pH adjuster down	EnviroAdjust 3245 NP
pH adjuster up	EnviroAdjust 2378
Cleaner booster additive	EnviroAdd 3352
Cleaner booster additive	EnviroAdd 3354
Solvent booster additive	EnviroAdd 3355
Wetting agent additive	EnviroAdd 2244



CONVERSION COATINGS

EnviroServe Chemicals is widely recognized as an industry leader in pretreatment technology through products such as our **EnviroPhos** and **EnviroKote** lines. These product lines are currently being used on all types of metal. We have products designed for ferrous and non-ferrous metals that provide outstanding corrosion resistance and enhanced paint adhesion.

Depending on your needs, we have the ability to provide the right product for the right application. These product lines are designed for multi-stage washers ranging from 2 stage and up. Some of our conversion coatings are preceded by a cleaner followed by rinse, while some of our other products are used as a cleaner/coater in the same stage.

Inorganic Conversion Coatings

Formulated to replace traditional iron phosphate, these products require no or very little heat to deposit an inorganic conversion coating. These types of coatings provide a microcrystalline surface in the nanometer (10^{-9} m) range and require a short contact time of 15 to 30 seconds. The "nanocrystals" formed increase the surface area of the substrate thus enhancing paint adhesion, corrosion protection and consequently salt-spray results. These inorganic conversion coatings do not require a non-chrome post treatment seal to achieve high performance adhesion, under film corrosion and salt-spray resistance.

These new technology coatings contain no regulated heavy metals and they significantly reduce phosphate from the process bath. Sludge is also reduced to a minimum while waste treatment costs and other effluent issues are greatly diminished. Rinse water consumption is also minimized because of the lower amount of total dissolved solids present in these new coating baths.

Iron Phosphate

The **EnviroPhos** product line of iron phosphates is very diverse and well proven. We have products that contain a single accelerator and products that utilize the synergy generated when using one of our proprietary multi-accelerated packages. In many cases our **EnviroPhos** products, when used in conjunction with our **EnviroSeal** rinses and a top quality paint, have been proven to provide over 1000 hours of salt spray resistance.

Zinc Phosphate

The **EnviroZinc** product line is designed to provide a uniform microcrystalline zinc phosphate structure. This product line is capable of meeting the most stringent corrosion resistance requirements. The **EnviroZinc** product line provides a fine grain coating on ferrous and nonferrous metals, when used in conjunction with our specialized grain refiner.



FINAL SEALS / RINSES

We have a full line of final seals and rinses to accommodate and complement any conversion coating process. Whether you are using an iron phosphate or an inorganic conversion coating, we have a sealer to enhance paint adhesion and increase corrosion resistance (salt spray results). Our sealers are used to eliminate flash rust.

EnviroServe Chemicals' EnviroSeal brand consists of a variety of sealers and rinses including alkaline blends, amine blends, solubilized metal blends, and polymer blends.



TESTING CAPABILITIES

EnviroServe Chemicals' R&D laboratory is very well equipped and staffed with highly qualified chemists and engineers to carry out research and product development, equipment design and to perform customer required testing as needed. Below is a partial list of the equipment and testing available for our customer's benefits!

Equipment

In-house 7 Stage Pilot Spray Washer
Agitated Immersion Washers
Powder Paint Booth
Industrial Cure Oven
Liquid Paint System
Salt Spray Cabinets
Humidity Chamber
Electronic and Analytical Balances
pH and Conductivity Meters
Scanning Electron and Atomic Force Micrography
(at NCSU and Duke University)

Testing

Conversion Coating Weights
Paint Adhesion Testing & Measuring
Dry Film Thickness
Impact Test
Conical Mandrel Test
Film Hardness Test
Salt Spray Test
Total Dissolved Solids
Total and Active Acid or Alkalinity Tests

EQUIPMENT

EnviroServe Chemicals can supply a wide range of manually and automatically controlled metering devices to ensure effective control of your pretreatment operating parameters. Consult your **EnviroServe Chemicals** representative for more details.

For further information, recommendations and other regulatory information please refer to the individual Product Data and Material Safety Data Sheets and/or contact **EnviroServe Chemicals**.

Find out how **EnviroServe Chemicals** can improve your pretreatment processes, reduce your energy costs and provide a better solution for your conversion coating needs.

- Call us at (910) 892-1791
- Visit us at www.enviroservechemicals.com
- E-mail us at sales@enviroserveinc.com

**Let Us Be Your Single Source Service-Oriented
Paint Pretreatment Chemical Supplier**

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An ISO 9001 : 2000 Certified Company

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